

### Remarks

#### Status of Claims:

Claims 1-17 and 20-21 are pending in the application. Each claim defines an invention that is novel and unobvious over the cited art. Favorable consideration of this case is respectfully requested.

#### Drawings:

The drawings were objected to because Figures 1B, 2B, and 4B are not labeled. Corrected Formal Drawings will be submitted upon allowance of claims in this case.

#### Claim Objections:

Claim 12 was objected to as informal. Claim 12 is hereby amended to correct the informalities indicated by the Examiner.

Dependent claims 2-17 and 21 were amended to recite "The method..." in place of the informal wording of "A method...".

#### Rejection Under 35 U.S.C. § 103(a):

Claims 1-3, 7-17, and 20-21 were rejected under 35 U.S.C. § 102(e)<sup>1</sup> as being anticipated by Ngo (6,528,432), with Linn (5,833,758) cited to show inherent properties, in view of Allen (5,985,524).

Claims 4-6 were rejected under 35 U.S.C. § 103(a) as being anticipated by Ngo (6,528,432), with Linn (5,833,758) cited to show inherent properties, in view of Allen, and further in view of Ni (6,465,159).

As discussed below, the Applicants swear behind Ngo. Ngo forms the basis for each claim rejection. In view of the disqualification of Ngo, the Applicants respectfully request the rejections be withdrawn.

#### Declaration Under 37 CFR 1.131:

Ngo was filed December 5, 2000 and does not claim any earlier priority. The present invention was reduced to practice prior to the Ngo filing date.

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<sup>1</sup> The applicants assume that the Examiner intended to issue the rejection under § 103(a).

Evidentiary support for reduction to practice prior to the Ngo filing is provided in the application as filed. Figure 4 of the application comprises two electron micrographs. Each electron micrograph is provided indicia emplaced by the automatic camera system used to take the pictures. Each micrograph is dated 7-Jul-00 (July 7, 2000).

The specification, as originally-filed, described Figure 4 in such manner that a person of skill would know that the inventor, at the time of taking the micrograph, was in possession of the invention. Particularly, a person of skill would know from the specification as filed that the present invention was reduced to practice as of the date the electron micrograph was taken. The specification discloses that Figure 4 is an electron micrograph taken following the completion of each of the steps of the inventive method. The specification recites:<sup>2</sup>

Turning now to Figure 4. The advantages conferred by the inventive method are confirmed by SEM pictures taken 7 days post treatment. The inventive method provides a means to stabilize high aspect ratio, post-etch lithographic images against collapse, the method comprising the steps of: (a) coating a substrate with an organic underlayer; (b) coating said underlayer with a photoresist wherein said photoresist comprises a stable, etch resistant, non-volatile oxide-forming material selected from the group consisting of silicon, phosphorous, germanium, aluminum, and boron; (c) imagewise exposing said photoresist to radiation; (d) developing an image in said photoresist; (e) transferring said image through said underlayer into said substrate thus forming a high aspect ratio resist image; and the improvement comprises (f) treating said high aspect ratio resist image with a chemically reducing plasma. A preferred chemically-reducing plasma comprises a species, such as ethylene, capable of generating hydrogen when excited into the plasma state. A more preferred chemically-reducing plasma comprises hydrogen. No pattern collapse is observed up to a week post treatment indicating that the H<sub>2</sub> plasma successfully removed and/or chemically reduced most if not all of the hygroscopic sulfite/sulfate species.

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<sup>2</sup> Specification, page 6, lines 3-17.

The dates of the electron micrographs provide evidentiary support for reduction to practice prior to the filing of Ngo.

The dates support the declaration under 37 CFR 1.131, swearing behind, and thus disqualifying Ngo.

**Conclusion:**

In view of the above, consideration and allowance are, therefore, respectfully solicited.

Accordingly, it is respectfully requested that the foregoing amendments be entered, that the application as so amended receive an examination on the merits, and that the claims as now presented receive an early allowance.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Commissioner is hereby authorized to charge any fees or credit any overpayment associated with this communication, including any extension fees or fees for the net addition of claims, to Deposit Account No. 22-0185.

Dated: *July 1, 2004*

Respectfully submitted,

By 

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